

5. Function Selection

WARNING

- When the retry function is selected, the inverter may restart automatically after tripping.
(Design the machine to ensure personal safety in the event of restart)

Accident may result.

- When the torque limiting function is selected, operating conditions may differ from preset conditions (acceleration/deceleration time or speed). In this case, personal safety must be assured.

Accident may result.

- If AUTO RESTART is selected in the restart mode after momentary power failure (function code F14), the inverter restarts automatically starting the motor rotation when the power is re-supplied.

Accident may result.

- When auto tuning (function code H01) is started, the motor, machine or equipment starts and stops repeatedly. Ensure safety before performing auto tuning.

Accident may result.

- If the user set the function codes wrongly or without completely understanding this user's manual, the motor may rotate with a torque or at a speed not permitted for the machine.

Accident or injury may result.

CAUTION

- During pre-excitation, the speed adjuster does not function and the motor may be rotated by load disturbance. When using pre-excitation, therefore, also use the machine brake.

Injury may result.

- If improper data is set at the function code related with speed adjuster as in the case of setting high gain abruptly, the motor may hunt.

Injury may result.

F: Fundamental Functions

Fcode	Communication address		Function name	Setting range
	485 number	Link number		
F00	0h	80(50 h)	Data protection	0 to 1 0 : Data change enable 1 : Data protection This is a function to protect writing from the Keypad panel. The protection of writing from the link (T-Link, RS485, etc.) is defined with H29 "Link function protection".
F01	1h		Speed setting N1	0 to 7 0 : KEYPAD operation (\wedge and \vee key) 1 : Analog input (0 to ± 10 VDC) 2 : Analog input (0 to +10VDC) 3 : UP/DOWN control 1 (initial speed = 0 r/min) 4 : UP/DOWN control 2 (initial speed = last value) 5 : UP/DOWN control 3 (initial speed = Creep speed 1 or 2) 6 : DIA card input 7 : DIB card input
F02	2h		Operation method	0 to 1 The method of operation is set. 0 : KEYPAD operation (FWD or REV or STOP key) (LOCAL) 1 : FWD or REV signal input (REMOTE) The change of REMOTE/LOCAL is possible also by RST+STOP key to the keypad panel. This operation corresponds to writing data of F02.
F03	3h	81(51 h)	M1 Maximum speed	50 to 1500 to 24000 r/min
F04	4h	82(52 h)	M1-Rated speed	50 to 24000 r/min
F05	5h	83(53 h)	M1-Rated voltage	80 to 999 V
F07	7h	84(54 h)	Acceleration time 1	0.01 to 5.00 to 99.99s 100.0 to 999.9s 1000 to 3600s
F08	8h	85(55 h)	Deceleration time 1	0.01 to 5.00 to 99.99s 100.0 to 999.9s 1000 to 3600s
F09	Ah	86(56 h)	M1 Electronic thermal overload relay (Select)	0 to 2 The motor overheating protection operates by using NTC thermistor with the motor only for VG. In this case, please make setting F10 Electronic thermal "Inactive". 0 : Inactive (When you use the motor only for VG) 1 : Active (for 4-pole standard motor, with self-cooling fan) 2 : Active (for Inverter motor, with separate cooling fan)
F11	Bh	87(57 h)	M1 Electronic thermal overload relay (Level)	0.01 to 99.99A 100.0 to 999.9A 1000 to 2000A
F12	Ch	88(58 h)	M1 Electronic thermal overload relay (Thermal time constant)	0.5 to 75.0 min
F14	Eh		Restart mode after momentary power failure	0 to 5 0 : Inactive (Trip and alarm when power failure occurs.) 1 : Inactive (Trip, and alarm when power recovers.) 2 : Inactive (Deceleration to stop, and trip and alarm.) 3 : Active (Smooth recovery by continuous operation mode) 4 : Active (Momentarily stops and restarts at speed on power failure) 5 : Active (Momentarily stops and restarts at starting speed)
F17	11h		Gain (terminal 12 input)	0.0 to 100 to 200.0 %
F18	12h		Bias (terminal 12 input)	-24000 to 0 to 24000 r/min
F20	14h	89(59 h)	DC brake (Starting speed)	0 to 3600 r/min
F21	15h	90(5A h)	DC brake (Braking level)	0 to 100 %
F22	16h	91(5B h)	DC brake (Braking time)	0.0 to 30.0 s 0.0 : (Inactive) 0.1 to 30.0 s
F23	17h	92(5C h)	Starting speed (Speed)	0.0 to 150.0 r/min (The frequency is limited so as not to become 0.1Hz or less. (When using sensless or V/F control))
F24	18h	93(5D h)	Starting speed (Holding time)	0.00 to 10.00 s
F26	1Ah	94(5E h)	Motor sound (Carrier Freq.)	0.75 to 1 to 15 kHz A factory setting value of 75kW or more is 10kHz.

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F27	1Bh	95(5F h)	Motor sound (Sound tone)	0 to 3 0 : level 0 1 : level 1 2 : level 2 3 : level 3
F36	24h		30RY operation mode	0 to 1 0 : The relay(30) exits on trip mode. 1 : The relay(30) exits on normal mode.
F37	25h	96(60 h)	Stop speed (Level)	0.0 to 10.0 to 150.0 r/min (The frequency is limited so as not to become 0.1Hz or less. (When using sensless or V/F control))
F38	26h	97(61 h)	Stop speed (Detection method)	0 to 1 0 : Reference value 1 : Detected value It is fixed 0 to use the V/F control.
F39	27h	98(62 h)	Stop speed (Zerospeed holding time)	0.00 to 0.50 to 10.00 s
F40	28h	99(63 h)	Torque limiting mode 1	0 to 3 0 : Torque limiting invalid 1 : Torque limiting 2 : Power limiting 3 : Torque current limiting
F41	29h	100(64 h)	Torque limiting mode 2	0 to 3 0 : Same limiting level (level 1) for 4 quadrants 1 : Drive torque limiting (level 1), and Brake torque limiting (level 2) 2 : Upper torque limiting (level 1), and Lower torque limiting (level 2) 3 : Same limiting level for 4 quadrants (level 1 and level 2 changeover) Level 1 and 2 is the data setting of the definition by F42, 43 ahead.
F42	2Ah	101(65 h)	Torque limiter value (level 1) selection	0 to 5 0 : Internal preset value by F44 1 : Ai terminal input value [TL-REF1] 2 : DIA card input 3 : DIB card input 4 : Link enabled 5 : PID output
F43	2Bh	102(66 h)	Torque limiter value (level 2) selection	0 to 5 0 : Internal preset value by F45 1 : Ai terminal input value [TL-REF2] 2 : DIA card input 3 : DIB card input 4 : Link enabled 5 : PID output
F44	2Ch	103(67 h)	Torque limiter value (level 1)	-300 to 150 to 300 %
F45	2Dh	104(68 h)	Torque limiter value (level 2)	-300 to 10 to 300 %
F46	2Eh	105(69 h)	Mechanical loss compensation	-300.00 to 0.00 to 300.00 % This is used when mechanical loss of the load makes amends.
F47	2Fh	106(6A h)	Torque bias set 1	-300.00 to 0.00 to 300.00 % This set value can be added to the torque reference value. TB1, 2 and 3 are switched by DI and are used.
F48	30h		Torque bias set 2	-300.00 to 0.00 to 300.00 % This set value can be added to the torque reference value. TB1, 2 and 3 are switched by DI and are used.
F49	31h		Torque bias set 3	-300.00 to 0.00 to 300.00 % This set value can be added to the torque reference value. TB1, 2 and 3 are switched by DI and are used.
F50	32h		Torque bias activation timer	0.00 to 1.00 s (300% / 1.00s) Time up to 300% is set.
F51	33h	251(6B h)	Torque reference monitor (polarity)	0 to 1 Polarity selection of the data output related to torque (AO, Keypad panel, code M) 0 : Display with torque polarity 1 : (+) for driving mode, and (-) for braking mode
F52	34h		LED monitor coefficient (Display coefficient A)	-999.00 to 1.00 to 999.00 The conversion coefficient to decide load axis rotation speed and the display value at the line speed displayed in LED are set. Display value = Motor speed \times (0.01 to 200.00) The set data is effective only by 0.01 to 200.00 and outside the range is invalid.

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Fcode	Communication address		Function name	Setting range
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F53	35h		LED monitor coefficient (Display coefficient B)	-999.00 to <u>1.00</u> to 999.00 The conversion coefficient to decide the reference value of the PID adjustment machine and the display value (amount of the process) of the amount of feedback is set by using display coefficient A and B. Display coefficient A ; Maximum value Display coefficient B ; Minimum value Display value = (Reference value or feedback value) * (Display coefficient A - B) + B
F54	36h		LED display filter	0.0 to <u>0.2</u> to 5.0 s Filter to prevent LED from flickering by change of the display data. The filter is effective in all the data selected with F55.
F55	37h		LED (Selection)	<u>0</u> to 28 0 : Detected speed 1 or reference speed (r/min) (depending on F56 while motor is stopped) 1 : Speed reference value 4 (ASR input) (r/min) 2 : Output frequency after slip compensation (Hz) 3 : Torque current reference (%) 4 : Torque reference value (%) 5 : Torque (calculated value) (%) 6 : Inverter input power (kW or HP) (depending on F60) 7 : Output current (A) 8 : Output voltage (V) 9 : DC link circuit voltage (V) 10 : Magnetic flux reference (%) 11 : Magnetic flux (calculated value) (%) 12 : Motor temperature ("C" ("—" is displayed when NTC thermistor unused.) 13 : Load shaft speed (r/min) (depending on F56) 14 : Line speed (m/min) (depending on F56) 15 : Ai adjusted value (I2) (%) 16 : Ai adjusted value (Ai1) (%) 17 : Ai adjusted value (Ai2) (%) 18 : Ai adjusted value (Ai3) (%) 19 : Ai adjusted value (Ai4) (%) The following data becomes non-display by the mode on the option. 20 : PID reference (%) (Display at the PID mode) 21 : PID feedback value (%) (Display at the PID mode) 22 : PID output value (%) (Display at the PID mode) 23 : Option monitor 1 (HEX) (Displayed with use of option) 24 : Option monitor 2 (HEX) (Displayed with use of option) 25 : Option monitor 3 (DEC) (Displayed with use of option) 26 : Option monitor 4 (DEC) (Displayed with use of option) 27 : Option monitor 5 (DEC) (Displayed with use of option) 28 : Option monitor 6 (DEC) (Displayed with use of option)
F56	38h		LED (Display at stop mode)	<u>0</u> to 1 Change of the display on F55 when the motor is stopping. The corresponding data is speed (0), load shaft rotation speed (13), and line speed (14). 0 : Speed reference (r/min) 1 : Speed feedback (r/min)
F57	39h		LCD (Selection)	<u>0</u> to 1 Change of operation mode display on Keypad panel 0 : Operation guide (State of operation, Direction of rotation) 1 : Bar graph monitor (Speed, Current, Torque)
F58	3Ah		LCD (Language)	<u>0</u> to 7 0 : Japanese 1 : English 2 : German 3 : French 4 : Spanish 5 : Italian 6 : Chinese 7 : Korean
F59	3Bh		LCD (Contrast)	0 to <u>5</u> to 10 <u>0</u> (Soft) to 10 (Hard)
F60	3Ch		Output unit selection (kW or HP)	<u>0</u> to 1 The unit of inverter power consumption and motor (M1,2,3) of the function setting is defined. 0 : kW 1 : HP
F61	3Dh	107(6B h)	ASR1 (P-gain)	0.1 to <u>10.0</u> to 200.0 (times)

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	485 number	Link number		
F62	3Eh	108(6C h)	ASR1 (I-gain)	0.010 to <u>0.200</u> to 1.000 s P control when setting 1.000
F63	3Fh	109(6D h)	ASR1 (Feed forward gain)	<u>0.000</u> to 9.999 s
F64	40h	110(6E h)	ASR1 (Input filter)	0.000 to <u>0.040</u> to 5.000 s
F65	41h	111(6F h)	ASR1 (Detection filter)	0.000 to <u>0.005</u> to 0.100 s
F66	42h	112(70 h)	ASR1 (Output filter)	0.000 to <u>0.002</u> to 0.100 s
F67	43h	113(71 h)	S-curve (Acc start side)	<u>0</u> to 50 %
F68	44h	114(72 h)	S-curve (Acc end side)	<u>0</u> to 50 %
F69	45h	115(73 h)	S-curve (Dec start side)	<u>0</u> to 50 %
F70	46h	116(74 h)	S-curve (Dec end side)	<u>0</u> to 50 %
F71	49h		Magnetic flux at light load	10 to <u>100</u> %
F74	4Ah	117(75 h)	Pre-exiting time	<u>0.0</u> to 10.0 s
F75	4Bh	118(76 h)	Pre-excitation initial Level	<u>100</u> to 400 %
F76	4Ch		Speed limiter (Mode select)	<u>0</u> to 3 0 : Limiting level 1 for forward rotation, and limiting level 2 for reverse rotation 1 : Limiting level 1 for both side rotation 2 : Limiting level 1 for upper limit, and limiting level 2 for lower limit 3 : Forward (Level 1) and reverse (Level 2). Add the [12] input as a bias.
F77	4Dh	79(4F h)	Speed limiting (Level 1)	-110.0 to <u>100.0</u> to 110.0 %
F78	4Eh	254(FE h)	Speed limiting (Level 2)	-110.0 to <u>100.0</u> to 110.0 %
F79	4Fh	119(77 h)	Motor selection (M1, M2, M3)	<u>0</u> to 2 An effective motor (M1, 2 or 3) is selected by the function or terminal. 0 : M1 select The signal input by the terminal is given to priority. M1 select : (MCH2,MCH3)=(OFF,OFF) (if there is no allocation) M2 select : (MCH2,MCH3)=(ON ,OFF)(ON,ON) 1 : M2 select (x function inactive) 2 : M3 select (x function inactive)
F80	50h		Current rating switching	<u>0</u> to 2 0 : CT (Overload current 150%) 1 : VT (Overload current 110%) 2 : HT (Overload torque 200/170%)

E: Extension Terminal Functions

Fcode	Communication address		Function name	Setting range
	485 number	Link number		
E01	101h	120(78 h)	X1 terminal function	<u>0</u> to 63 0 to 3 : Multistep speed selection (1 to 15 steps) (0 : SS1, 1 : SS2, 2 : SS4, 3 : SS8) 4, 5 : ASR and ACC/DEC time selection (4 steps) (4 : RT1, 5 : RT2) 6 : 3 wire operation stop command (HLD) 7 : Coast-to-stop command (BX) 8 : Alarm reset (RST) 9 : External Alarm (THR) 10 : Jogging operation (JOG) 11 : Speed setting 2 / Speed setting 1 (N2/N1) 12 : Motor M2 selection (M-CH2) 13 : Motor M3 selection (M-CH3) 14 : DC brake command (DCBRK) 15 : ACC/DEC cleared to zero (CLR) 16 : Creep speed switching in UP/DOWN control (CRP-N2/N1) 17 : UP command (UP) 18 : DOWN command (DOWN) 19 : Write enable for KEYPAD (WE-KP) 20 : PID control cancel (N/PID) 21 : Inverse mode changeover (IVS) 22 : Interlock signal for 52-2 (IL) 23 : Write enable through link (WE-LK) 24 : Operation selection through link (LE) 25 : Universal DI (U-DI) 26 : Pick up start mode (STM) 27 : Synchronization command (PG (PR) optional function) (SYC) 28 : Zero speed locking command (LOCK) 29 : Pre-exiting command (EXITE) 30 : Speed reference limiter cancel (N-LIM) (Related function : F76, F77, F78) 31 : H41 [torque reference] cancel (H41-CCL) 32 : H42 [torque current reference] cancel (H42-CCL) 33 : H43 [magnetic flux reference] cancel (H43-CCL) 34 : F40 [torque limiter mode 1] cancel (F40-CCL) 35 : Torque limiter 2 / Torque limiter 1 (TL2/TL1) 36 : Bypass from ramp function generator (BPS) 37, 38 : Torque bias reference 1/2 (37 : TB1, 38 : TB2) 39 : DROOP selection (DROOP) 40 : Zero hold command for Ai1 (ZH-AI1) 41 : Zero hold command for Ai2 (ZH-AI2) 42 : Zero hold command for Ai3 (option) (ZH-AI3) 43 : Zero hold command for Ai4 (option) (ZH-AI4) 44 : Ai1 polarity change (REV-AI1) 45 : Ai2 polarity change (REV-AI2) 46 : Ai3 polarity change (option) (REV-AI3) 47 : Ai4 polarity change (option) (REV-AI4) 48 : Inverse mode of PID output (PID-INV) 49 : PG alarm cancel (PG-CCL) 50 : Undervoltage cancel (LU-CCL) 51 : Ai torque bias hold [H-TB] 52 : STOP1 (The motor stops with normal deceleration time.) (STOP1) 53 : STOP2 (The motor stops with deceleration 4) (STOP2) 54 : STOP3 (The motor stops with max. torque.) (STOP3) 55 : DIA data latch (DIA option) (DIA) 56 : DIB data latch (DIB option) (DIB) 57 : Multivinding motor cancel (SI (MWS) option) (MT-CCL) 58 to 63 : Option Di 1/2/3/4/5/6 (O-DI1 to 6)
E02	102h	121(79 h)	X2 terminal function	0 to <u>1</u> to 63
E03	103h	122(7A h)	X3 terminal function	0 to <u>2</u> to 63
E04	104h	123(7B h)	X4 terminal function	0 to <u>3</u> to 63
E05	105h	124(7C h)	X5 terminal function	0 to <u>4</u> to 63
E06	106h	125(7D h)	X6 terminal function	0 to <u>5</u> to 63
E07	107h	126(7E h)	X7 terminal function	0 to <u>7</u> to 63
E08	108h	127(7F h)	X8 terminal function	0 to <u>8</u> to 63
E09	109h	128(80 h)	X9 terminal function	0 to <u>9</u> to 63
E10	10Ah	129(81 h)	X11 terminal function	0 to <u>25</u> to 63
E11	10Bh	130(82 h)	X12 terminal function	0 to <u>25</u> to 63

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Fcode	Communication address		Function name	Setting range
	485 number	Link number		
E12	10Ch	131(83 h)	X13 terminal function	0 to <u>25</u> to 63
E13	10Dh	132(84 h)	X14 terminal function	0 to <u>25</u> to 63
E14	10Eh		X terminal function normal open/closed	<u>0000</u> to 01FF Setting of normal state of X1-X9. 0 : Normally open 1 : Normally closed
E15	10Fh	133(85 h)	Y1 terminal function	0 to <u>1</u> to 47 0 : Inverter running (RUN) 1 : Speed existence signal (N-EX) 2 : Speed agreement signal (N-AG) 3 : Speed egilivarent signal (N-AR) 4 : Speed level detection 1 (N-DT1) 5 : Speed level detection 2 (N-DT2) 6 : Speed level detection 3 (N-DT3) 7 : Stopping on undervoltage (LU) 8 : Detected torque polarity (Braking/Driving) (B/D) 9 : Torque limiting (TL) 10 : Torque detection 1 (T-DT1) 11 : Torque detection 2 (T-DT2) 12 : KEYPAD operation mode (KP) 13 : Inverter stopping (STP) 14 : Operation ready output (RDY) 15 : Magnetic flux detection signal (MF-DT) 16 : Motor M2 selection status (SW-M2) 17 : Motor M3 selection status (SW-M3) 18 : Mechanical brake release signal (BRK) 19 : Alarm indication signal 1 (AL1) 20 : Alarm indication signal 2 (AL2) 21 : Alarm indication signal 4 (AL4) 22 : Alarm indication signal 8 (AL8) 23 : Fan operation signal (FAN) 24 : Auto-resetting (TRY) 25 : Universal DO (U-DO) 26 : Heat sink overheat early warning (INV-OH) 27 : Synchronization completion signal (SY-C) 28 : Lifetime alarm (LIFE) 29 : Under acceleration (U-ACC) 30 : Under deceleration (U-DEC) 31 : Inverter overload early warning (INV-OL) 32 : Motor overheat early warning (M-OH) 33 : Motor overload early warning (M-OL) 34 : DB overload early warning (DB-OL) 35 : Link transmission error (LK-ERR) 36 : Load adaptive control under limiting (ANL) 37 : Load adaptive control under calculation (ANC) 38 : Analog torque bias hold (TBH) 39 to 47 : Option DO1 to 9 (O-DO1 to O-DO9)
E16	110h	134(86 h)	Y2 terminal function	0 to <u>2</u> to 47
E17	111h	135(87 h)	Y3 terminal function	0 to <u>3</u> to 47
E18	112h	136(88 h)	Y4 terminal function	0 to <u>4</u> to 47
E19	113h	137(89 h)	Y5 terminal function	0 to <u>14</u> to 47
E20	114h	138(8A h)	Y11 terminal function	0 to <u>26</u> to 47
E21	115h	139(8B h)	Y12 terminal function	0 to <u>26</u> to 47
E22	116h	140(8C h)	Y13 terminal function	0 to <u>26</u> to 47
E23	117h	141(8D h)	Y14 terminal function	0 to <u>26</u> to 47
E24	118h	142(8E h)	Y15 terminal function	0 to <u>26</u> to 47
E25	119h	143(8F h)	Y16 terminal function	0 to <u>26</u> to 47
E26	11Ah	144(90 h)	Y17 terminal function	0 to <u>26</u> to 47
E27	11Bh	145(91 h)	Y18 terminal function	0 to <u>26</u> to 47
E28	11Ch		Y terminal function normally open/closed	<u>0000</u> to 001F Setting of normal state of Y1to Y4,R,Y. 0 : Normally open 1 : Normally close

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E29	11Dh	146(92 h)	PG pulse output selection	0 to 9 0 : No dividing 1 : 1/2 2 : 1/4 3 : 1/8 4 : 1/16 5 : 1/32 6 : 1/64 0 to 6: Internal PG inputs are output after being divided. 7 : Pulse oscillation mode (A/B 90° phase difference signal) Internal speed reference is output after pulse conversion. 8 : PG (PD) Pulse inputs for position encoder are directly output. 9 : PG (PR) Pulse inputs for position command are directly output.
E30	11Eh		Motor OH protection (temperature)	100 to <u>150</u> to 200°C It is effective when NTC thermistor is used with selected motor (M1,M2).
E31	11Fh		M-OH early warning (temperature)	50 to <u>75</u> to 200 °C It is effective when NTC thermistor is used with selected motor (M1,M2).
E32	120h	205(CD h)	M1-M3 (operation level PTC)	0.00 to <u>1.60</u> to 5.00 V
E33	121h		INV-OL early warning	25 to <u>90</u> to 100 %
E34	122h		M-OL early warning	25 to <u>90</u> to 100 %
E35	123h		DB overload protection	<u>0</u> to 100 %
E36	124h		DB-OL early warning	0 to <u>80</u> to 100 %
E37	125h		DB thermal time constant	0 to <u>300</u> to 1000 s
E38	126h	147(93 h)	Speed detection method	<u>000</u> to 111 (N-DT1) (N-DT2) (N-DT3) 0 : Detected speed 1 : Speed reference Only reference values are effective under VF control.
E39	127h	148(94 h)	N-DT1 Level	0 to 1500 to 24000 r/min
E40	128h	149(95 h)	N-DT2 Level	-24000 to 1500 to 24000 r/min
E41	129h	150(96 h)	N-DT3 Level	-24000 to 1500 to 24000 r/min
E42	12Ah	151(97 h)	N-AR detection width	1.0 to <u>3.0</u> to 20.0 %
E43	12Bh	152(98 h)	N-AG detection width	1.0 to <u>3.0</u> to 20.0 %
E44	12Ch	153(99 h)	N-AG off-delay timer	0.000 to <u>0.100</u> to 1.000 s
E45	12Dh	154(9A h)	Speed disagreement alarm	0 to 21
E46	12Eh	155(9B h)	Torque detection level 1	0 to <u>30</u> to 300 % When the V/F control is used, the calculation value is set.
E47	12Fh	156(9C h)	Torque detection level 2	0 to <u>30</u> to 300 % When the V/F control is used, the calculation value is set.
E48	130h	157(9D h)	Magnetic flux detection level	10 to <u>100</u> %
E49	131h		Ai1 function selection	0 to 18 0 : Input signal off (OFF) 1 : Auxiliary speed setting 1 (before ramp function) (±10 V / ±Nmax) (AUX-N1) 2 : Auxiliary speed setting 2 (after ramp function) (±10 V / ±Nmax) (AUX-N2) 3 : Torque limiter level 1 (±10 V / ±150 %) (TL-REF1) 4 : Torque limiter level 2 (±10 V / ±150 %) (TL-REF2) 5 : Torque bias reference (±10 V / ±150 %) (TB-REF) 6 : Torque reference (before limit function) (±10 V / ±150 %) (T-REF) 7 : Torque current reference (±10 V / ±150 %) (IT-REF) 8 : Creep speed 1 for UP/DOWN control (±10 V / ±Nmax) (CRP-N1) 9 : Creep speed 2 for UP/DOWN control (±10 V / ±Nmax) (CRP-N2) 10 : Magnetic flux reference (+10 V / +100 %) (MF-REF) 11 : Detected line speed (±10 V / ±Nmax) (LINE-N) 12 : Motor temperature (+10 V / 200 °C) (M-TMP) 13 : Speed override (±10 V / ±50 %) (N-OR) 14 : Universal Ai (±10 V / ±4000 (h)) (U-AI) 15 : PID feedback (±10 V / ±20000 (d)) (PID-FB) 16 : PID reference (±10 V / ±20000 (d)) (PID-REF) 17 : PID correction gain (±10 V / ±4000 (h)) (PID-G) 18 : Option Ai (±10 V / ±7FFF (h)) (O-AI)
E50	132h		Ai2 function selection	0 to 18

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E51	133h		Ai3 function selection	0 to 18 (When the AIO option is installed, this is displayed.)
E52	134h		Ai4 function selection	0 to 18 (When the AIO option is installed, this is displayed.)
E53	135h		Gain adjustment for analog input (Ai1)	-10.000 to <u>1.000</u> to 10.000 (times) Use \wedge or \vee key to write data onto RAM during editing with KEYPAD panel. Using F/D key causes data writing onto nonvolatile memory.
E54	136h		Gain adjustment for analog input (Ai2)	-10.000 to <u>1.000</u> to 10.000 (times) Use \wedge or \vee key to write data onto RAM during editing with KEYPAD panel. Using F/D key causes data writing onto nonvolatile memory.
E55	137h		Gain adjustment for analog input (Ai3)	-10.000 to <u>1.000</u> to 10.000 (times) Use \wedge or \vee key to write data onto RAM during editing with KEYPAD panel. Using F/D key causes data writing onto nonvolatile memory. (When the AIO option is installed, this is displayed.)
E56	138h		Gain adjustment for analog input (Ai4)	-10.000 to <u>1.000</u> to 10.000 (times) Use \wedge or \vee key to write data onto RAM during editing with KEYPAD panel. Using F/D key causes data writing onto nonvolatile memory. (When the AIO option is installed, this is displayed.)
E57	139h		Bias adjustment for analog input (Ai1)	-100.0 to <u>0.0</u> to 100.0 % Use \wedge or \vee key to write data onto RAM during editing with KEYPAD panel. Using F/D key causes data writing onto nonvolatile memory.
E58	13Ah		Bias adjustment for analog input (Ai2)	-100.0 to <u>0.0</u> to 100.0 % Use \wedge or \vee key to write data onto RAM during editing with KEYPAD panel. Using F/D key causes data writing onto nonvolatile memory.
E59	13Bh		Bias adjustment for analog input (Ai3)	-100.0 to <u>0.0</u> to 100.0 % Use \wedge or \vee key to write data onto RAM during editing with KEYPAD panel. Using F/D key causes data writing onto nonvolatile memory. (When the AIO option is installed, this is displayed.)
E60	13Ch		Bias adjustment for analog input (Ai4)	-100.0 to <u>0.0</u> to 100.0 % Use \wedge or \vee key to write data onto RAM during editing with KEYPAD panel. Using F/D key causes data writing onto nonvolatile memory. (When the AIO option is installed, this is displayed.)
E61	13Dh		Filter adjustment for analog input (Ai1)	0.000 to <u>0.010</u> to 0.500 s
E62	13Eh		Filter adjustment for analog input (Ai2)	0.000 to <u>0.010</u> to 0.500 s
E63	13Fh		Filter adjustment for analog input (Ai3)	0.000 to <u>0.010</u> to 0.500 s (When the AIO option is installed, this is displayed.)
E64	140h		Filter adjustment for analog input (Ai4)	0.000 to <u>0.010</u> to 0.500 s (When the AIO option is installed, this is displayed.)
E65	141h		Increment/decrement limiter (Ai1)	<u>0.00</u> to 60.00 s
E66	142h		Increment/decrement limiter (Ai2)	<u>0.00</u> to 60.00 s
E67	143h		Increment/decrement limiter (Ai3)	<u>0.00</u> to 60.00 s (When the AIO option is installed, this is displayed.)
E68	144h		Increment/decrement limiter (Ai4)	<u>0.00</u> to 60.00 s (When the AIO option is installed, this is displayed.)

Underline indicates a factory setting.
Items without underline have different factory settings according to capacity.

Fcode	Communication address		Function name	Setting range
	485 number	Link number		
E69	145h		AO1 function selection	0 to <u>1</u> to 31 0 : Detected speed 1 (0 to ±10 Vdc / 0 to ±Nmax speed) (N-FB1+) 1 : Detected speed 1 (0 to ±10 Vdc / 0 to ±Nmax speed) (N-FB1±) 2 : Speed settg 2 (before ACC/DEC calculating) (0 to ±10 Vdc / 0 to ±Nmax) (N-REF2) 3 : Speed settg 4 (ASR input) (0 to ±10 Vdc / 0 to ±Nmax) (N-REF4) 4 : Detected speed 2 (ASR input) (0 to ±10 Vdc / 0 to ±Nmax) (N-FB2±) 5 : Detected line speed (0 to ±10 Vdc / 0 to ±Nmax) (LINE-N±) 6 : Torque current reference (0 to ±10 Vdc / 0 to ±150 %) (IT-REF±) 7 : Torque current reference (0 to 10 Vdc / 0 to ±150 %) (IT-REF+) 8 : Torque reference (0 to ±10 Vdc / 0 to ±150 %) (T-REF±) 9 : Torque reference (0 to 10 Vdc / 0 to ±150 %) (T-REF+) 10 : Motor current (0 to 10 Vdc / 0 to 200 %) (I-AC) 11 : Motor voltage (0 to 10 Vdc / 0 to 200 %) (V-AC) 12 : Input power (0 to 10 Vdc / 0 to 200 %) (PWR) 13 : DC link circuit voltage (0 to 10 Vdc / 0 to 800 V) (V-DC) 14 : Test voltage output (+10 Vdc) (P10) 15 : Test voltage output (-10 Vdc) (N10) 30 : Universal analog output (U-AO) 31 : Option AO (O-AO)
E70	146h		AO2 function selection	0 to <u>6</u> to 31
E71	147h		AO3 function selection	0 to <u>3</u> to 31
E72	148h		AO4 function selection	<u>0</u> to 31 (When the AIO option is installed, this is displayed.)
E73	149h		AO5 function selection	<u>0</u> to 31 (When the AIO option is installed, this is displayed.)
E74	14Ah		Gain adjustment for analog output (AO1)	-100.00 to <u>1.00</u> to 100.00 (times)
E75	14Bh		Gain adjustment for analog output (AO2)	-100.00 to <u>1.00</u> to 100.00 (times)
E76	14Ch		Gain adjustment for analog output (AO3)	-100.00 to <u>1.00</u> to 100.00 (times)
E77	14Dh		Gain adjustment for analog output (AO4)	-100.00 to <u>1.00</u> to 100.00 (times) (When the AIO option is installed, this is displayed.)
E78	14Eh		Gain adjustment for analog output (AO5)	-100.00 to <u>1.00</u> to 100.00 (times) (When the AIO option is installed, this is displayed.)
E79	14Fh		Bias adjustment for analog output (AO1)	-100.0 to <u>0.0</u> to 100.0 %
E80	150h		Bias adjustment for analog output (AO2)	-100.0 to <u>0.0</u> to 100.0 %
E81	151h		Bias adjustment for analog output (AO3)	-100.0 to <u>0.0</u> to 100.0 %
E82	152h		Bias adjustment for analog output (AO4)	-100.0 to <u>0.0</u> to 100.0 % (When the AIO option is installed, this is displayed.)
E83	153h		Bias adjustment for analog output (AO5)	-100.0 to <u>0.0</u> to 100.0 % (When the AIO option is installed, this is displayed.)
E84	154h		Filter adjustment for analog output (AO1-5)	0.000 to <u>0.010</u> to 0.500 s

You can change the setting of a function indicated by during operation.
You should stop operation to change the setting of other functions.

C: Control Functions of Frequency

Fcode	Communication address		Function name	Setting range
	485 number	Link number		
C01	201h		Jump speed (Speed 1)	<u>0</u> to 24000 r/min
C02	202h		Jump speed (Speed 2)	0 to 24000 r/min
C03	203h		Jump speed (Speed 3)	<u>0</u> to 24000 r/min
C04	204h		Jump speed (Hysteresis)	<u>0</u> to 1000 r/min
C05	205h	158(9E h)	Multistep speed 1	0 to 24000 r/min / <u>0.00</u> to 100.00 % / <u>0.0</u> to 999.9 m/m (Change by C21)
C06	206h	159(9F h)	Multistep speed 2	0 to 24000 r/min / <u>0.00</u> to 100.00 % / <u>0.0</u> to 999.9 m/m (Change by C21)
C07	207h	160(A0 h)	Multistep speed 3	0 to 24000 r/min / <u>0.00</u> to 100.00 % / <u>0.0</u> to 999.9 m/m (Change by C21)
C08	208h	161(A1 h)	Multistep speed 4	0 to 24000 r/min / <u>0.00</u> to 100.00 % / <u>0.0</u> to 999.9 m/m (Change by C21)
C09	209h	162(A2 h)	Multistep speed 5	0 to 24000 r/min / <u>0.00</u> to 100.00 % / <u>0.0</u> to 999.9 m/m (Change by C21)
C10	20Ah	163(A3 h)	Multistep speed 6	0 to 24000 r/min / <u>0.00</u> to 100.00 % / <u>0.0</u> to 999.9 m/m (Change by C21)
C11	20Bh	164(A4 h)	Multistep speed 7	0 to 24000 r/min / <u>0.00</u> to 100.00 % / <u>0.0</u> to 999.9 m/m (Change by C21)
C12	20Ch		Multistep speed 8	0 to 24000 r/min / <u>0.00</u> to 100.00 % / <u>0.0</u> to 999.9 m/m (Change by C21)
C13	20Dh		Multistep speed 9	0 to 24000 r/min / <u>0.00</u> to 100.00 % / <u>0.0</u> to 999.9 m/m (Change by C21)
C14	20Eh		Multistep speed 10	0 to 24000 r/min / <u>0.00</u> to 100.00 % / <u>0.0</u> to 999.9 m/m (Change by C21)
C15	20Fh		Multistep speed 11	0 to 24000 r/min / <u>0.00</u> to 100.00 % / <u>0.0</u> to 999.9 m/m (Change by C21)
C16	210h		Multistep speed 12	0 to 24000 r/min / <u>0.00</u> to 100.00 % / <u>0.0</u> to 999.9 m/m (Change by C21)
C17	211h		Multistep speed 13	0 to 24000 r/min / <u>0.00</u> to 100.00 % / <u>0.0</u> to 999.9 m/m (Change by C21)
C18	212h		Multistep speed 14 / Creep speed 1	0 to 24000 r/min / <u>0.00</u> to 100.00 % / <u>0.0</u> to 999.9 m/m (Change by C21)
C19	213h		Multistep speed 15 / Creep speed 2	0 to 24000 r/min / <u>0.00</u> to 100.00 % / <u>0.0</u> to 999.9 m/m (Change by C21)
C20	214h		Multistep speed agreement timer	<u>0.000</u> to 0.100 s
C21	215h		Multistep speed setting definition	<u>0</u> to 2 0 : 0 to 24000 r/min 1 : 0.00 to 100.00% 2 : 0.0 to 999.9 m/m Defines setting methods of C05 to C19. With selection of "1", the setting range applies to the max speeds (F03, A06, A40) of selected motor. Refer to F79 for motor selection.
C25	219h		Speed setting N2	0 to 7 * Same as (F01)
C29	21Dh		Jogging speed	0 to 50 to 24000 r/min
C30	21Eh		ASR-JOG (P-gain)	0.1 to <u>10.0</u> to 200.0 (times)
C31	21Fh		ASR-JOG (I-gain)	0.010 to <u>0.200</u> to 1.000 s P control when setting 1.000
C32	220h		ASR-JOG (Input filter)	0.000 to <u>0.040</u> to 5.000 s
C33	221h		ASR-JOG (Detection filter)	0.000 to <u>0.005</u> to 0.100 s
C34	222h		ASR-JOG (Output filter)	0.000 to <u>0.002</u> to 0.100 s
C35	223h		Acceleration time JOG	0.01 to <u>5.00</u> to 99.99s 100.0 to 999.9s 1000 to 3600s
C36	224h		Deceleration time JOG	0.01 to <u>5.00</u> to 99.99s 100.0 to 999.9s 1000 to 3600s
C37	225h		S-curve JOG (Start side)	<u>0</u> to 50 %
C38	226h		S-curve JOG (End side)	<u>0</u> to 50 %
C40	228h		ASR2 (P-gain)	0.1 to <u>10.0</u> to 200.0 (times)
C41	229h		ASR2 (I-gain)	0.010 to <u>0.200</u> to 1.000 s P control when setting 1.000
C42	22Ah		ASR2 (F/F-gain)	<u>0.000</u> to 9.999 s
C43	22Bh		ASR2 (Input filter)	0.000 to <u>0.040</u> to 5.000 s
C44	22Ch		ASR2 (Detection filter)	0.000 to <u>0.005</u> to 0.100 s
C45	22Dh		ASR2 (Output filter)	0.000 to <u>0.002</u> to 0.100 s

Underline indicates a factory setting.
Items without underline have different factory settings according to capacity.

Fcode	Communication address		Function name	Setting range
	485 number	Link number		
E46	22Eh		Acceleration time 2	0.01 to <u>5.00</u> to 99.99s 100.0 to 999.9s 1000 to 3600s
E47	22Fh		Deceleration time 2	0.01 to <u>5.00</u> to 99.99s 100.0 to 999.9s 1000 to 3600s
E48	230h		S-curve 2 (Start side)	<u>0</u> to 50 %
E49	231h		S-curve 2 (End side)	<u>0</u> to 50 %
E50	232h		ASR3 (P-gain)	0.1 to <u>10.0</u> to 200.0 (times)
E51	233h		ASR3 (I-gain)	0.010 to <u>0.200</u> to 1.000 s P control when setting 1.000
E52	234h		ASR3 (F/F-gain)	<u>0.000</u> to 9.999 s
E53	235h		ASR3 (Input filter)	0.000 to <u>0.040</u> to 5.000 s
E54	236h		ASR3 (Detection filter)	0.000 to <u>0.005</u> to 0.100 s
E55	237h		ASR3 (Output filter)	0.000 to <u>0.002</u> to 0.100 s
E56	238h		Acceleration time 3	0.01 to <u>5.00</u> to 99.99s 100.0 to 999.9s 1000 to 3600s
E57	239h		Deceleration time 3	0.01 to <u>5.00</u> to 99.99s 100.0 to 999.9s 1000 to 3600s
E58	23Ah		S-curve 3 (Start side)	<u>0</u> to 50 %
E59	23Bh		S-curve 3 (End side)	<u>0</u> to 50 %
E60	23Ch		ASR4 (P-gain)	0.1 to <u>10.0</u> to 200.0 (times)
E61	23Dh		ASR4 (I-gain)	0.010 to <u>0.200</u> to 1.000 s P control when setting 1.000
E62	23Eh		ASR4 (F/F-gain)	<u>0.000</u> to 9.999 s
E63	23Fh		ASR4 (Input filter)	0.000 to <u>0.040</u> to 5.000 s
E64	240h		ASR4 (Detection filter)	0.000 to <u>0.005</u> to 0.100 s
E65	241h		ASR4 (Output filter)	0.000 to <u>0.002</u> to 0.100 s
E66	242h		Acceleration time 4	0.01 to <u>5.00</u> to 99.99s 100.0 to 999.9s 1000 to 3600s
E67	243h		Deceleration time 4	0.01 to <u>5.00</u> to 99.99s 100.0 to 999.9s 1000 to 3600s
E68	244h		S-curve 4 (Start side)	<u>0</u> to 50 %
E69	245h		S-curve 4 (End side)	<u>0</u> to 50 %
E70	246h		ASR switching time	0.00 to <u>1.00</u> to 2.55 s
E71	247h	165(A5 h)	ACC/DEC switching speed	<u>0.00</u> to 100.00 %
E72	248h	166(A6 h)	ASR switching time	<u>0.00</u> to 100.00 %
E73	249h		Creep speed select (at UP/DOWN mode)	<u>00</u> to 11 (Creep Speed 1)(Creep Speed 2) 0:Function setting (C18,19) 1:Analog input (CRP-N1, CRP-N2)

You can change the setting of a function indicated by during operation.
You should stop operation to change the setting of other functions.

P: Motor Parameters

Fcode	Communication address		Function name	Setting range
	485 number	Link number		
P01	301h		M1 Control method	<u>0</u> to 3 0: Vector control 1: Sensorless vector control 2: Simulation operation mode 3: Vector control (Synchronous motors)
P02	302h		M1 selection (for Motor parameter setting)	0 to 37 (Target ROM No. H1/20011 or later) Display (kW,HP) changes by setting F60. 0 to 35: Settings for motors dedicated for VG7 Data at F04, F05, and P03 to P27 are automatically set and write-protected. 36: P-OTHER Data at F04, F05, and P03 to P27 are write-protected and cannot be overwritten. 37: OTHER Data at F04, F05, and P03 to P27 are write-protected and cannot be overwritten.
P03	303h	167(A7 h)	M1-Rated capacity	0.00 to 500.00kW at F60=0 <u>0.00</u> to 600.00HP at F60=1
P04	304h	168(A8 h)	M1-Rated current	0.01 to 99.99A 100.0 to 999.9A 1000 to 2000A
P05	305h	169(A9 h)	M1-Poles	<u>2</u> to 4 to 30 (poles)
P06	306h	170(AA h)	M1-%R1	0.00 to 30.00 %
P07	307h	171(AB h)	M1-%X	0.00 to 50.00 %
P08	308h	172(AC h)	M1-Exciting current	0.01 to 99.99A 100.0 to 999.9A 1000 to 2000A
P09	309h	173(AD h)	M1-Torque current	0.01 to 99.99A 100.0 to 999.9A 1000 to 2000A
P10	30Ah	174(AE h)	M1-Slip (Driving)	0.001 to 10.000 Hz
P11	30Bh	175(AF h)	M1-Slip (Braking)	0.001 to 10.000 Hz
P12	30Ch	176(B0 h)	M1-Iron loss coefficient 1	0.00 to 10.00 %
P13	30Dh	177(B1 h)	M1-Iron loss coefficient 2	0.00 to 10.00 %
P14	30Eh	178(B2 h)	M1-Iron loss coefficient 3	0.00 to 10.00 %
P15	30Fh	179(B3 h)	M1-Magnetic saturation coefficient 1	0.0 to 100.0 %
P16	310h	180(B4 h)	M1-Magnetic saturation coefficient 2	0.0 to 100.0 %
P17	311h	181(B5 h)	M1-Magnetic saturation coefficient 3	0.0 to 100.0 %
P18	312h	182(B6 h)	M1-Magnetic saturation coefficient 4	0.0 to 100.0 %
P19	313h	183(B7 h)	M1-Magnetic saturation coefficient 5	0.0 to 100.0 %
P20	314h	184(B8 h)	M1-Secondary time constant	0.001 to 9.999 s
P21	315h	185(B9 h)	M1-Induced voltage coefficient	0 to 999 V
P22	316h	186(BA h)	M1-R2 correction coefficient 1	0.500 to 5.000
P23	317h	187(BB h)	M1-R2 correction coefficient 2	0.500 to 5.000
P24	318h	188(BC h)	M1-R2 correction coefficient 3	0.010 to 5.000
P25	319h	189(BD h)	M1-Exciting current correction coefficient.	0.000 to 5.000
P26	31Ah	190(BE h)	M1-ACR-P gain	0.1 to 20.0
P27	31Bh	191(BF h)	M1-ACR-I gain	0.5 to 100.0 ms
P28	31Ch	192(C0 h)	M1-PG pulses	100 to 1024 to 60000
P29	31Dh	214(D6 h)	M1-External PG correction coefficient	0000 to 4000 to 4FFF
P30	31Eh	193(C1 h)	M1-thermistor selection	0 to <u>1</u> to 3 0: No use thermistor 1: NTC thermistor 2: PTC thermistor 3: Ai (M-TMP) Please do the protection level setting of the motor at E30-E32.

Underline indicates a factory setting.

Items without underline have different factory settings according to capacity.

H: High Performance Functions

Fcode	Communication address		Function name	Setting range
	485 number	Link number		
H01	401h		Tuning operation selection	0 to 4 After writing the data, this function's data code automatically returns to 0. 0 : Inactive 1 : ASR system tuning 2 : R1, L, σ tuning 3 : Motor parameters tuning at stopping mode 4 : Motor parameters tuning at running mode The data after the tuning goes out when the power supply is turned off. H02 "All save function" must operate when the maintenance (preservation) of the data is necessary.
H02	402h	14(E h)	All Save Function	0 to 1 (Target ROM No. H1/20060 or later) When tuning is executed at H01 and the internal data is written, or when the data is written by way of the link system (T-Link, field bus, and RS485, etc.), the data goes out when the power supply of the inverter is turned off. This function must operate when preservation is necessary. After writing the data, this function's data code automatically returns to 0.
H03	403h		Data initializing (Data reset)	0 to 1 The data which the customer rewrote is returned to the state of the factory setting value. Target functions for initialization are all fields of F, E, C, H, α , L, and U except motor parameter field (P.A). After writing the data, this function's data code automatically returns to 0.
H04	404h		Auto-reset (Times)	0 to 10 0 : (Inactive) 1 to 10 times The auto-resetting signal can be output to the output terminal.
H05	405h		Auto-reset (Reset interval)	0.01 to <u>5.00</u> to 20.00 s
H06	406h		Fan stop operation	0 to 1 The temperature of the cooling fan in the inverter is detected and it is a function to control the cooling fan automatically ON/OFF. It always rotates when inactive is selected. 0 : Inactive 1 : Active The signal indicating the cooling fan operation can be output by synchronizing with this function.
H08	408h		Rev.phase sequence lock	0 to 1 0 : Inactive 1 : Active
H09	409h	194(C2 h)	Start mode (rotating motor pick up)	0 to 2 0 : Inactive 1 : Active (at after momentary power failure) 2 : Active (at all start mode)
H10	40Ah	195(C3 h)	Energy-saving operation	0 to 1 0 : Inactive 1 : Active
H11	40Bh		Automatic operation OFF function	0 to 2 It is a function when becoming following the stop speed setting to turn off the inverter automatically. 0 : Deceleration stop with FWD or REV shorted to CM between FWD-CM and REV-CM. 1 : The inverter is turned off below the stop speed even for ON between FWD-CM and REV-CM. 2: Coast-to-stop with FWD or REV shorted to CM.
H13	40Dh	196(C4 h)	Restart after momentary power failure (Restart waiting time)	0.1 to <u>0.5</u> to 5.0 s
H14	40Eh		Restart after momentary power failure (Fall rate)	1 to <u>500</u> to 3600 (r/min/s)
H15	40Fh		Restart after momentary power failure (Holding voltage on continuous operation)	3ph 200V : 200 to <u>235</u> to 300V 3ph 400V : 400 to <u>470</u> to 600V
H16	410h		Operation command selfhold setting	0 to <u>1</u> 0 : Set at H17 1 : Maximum time (The inverter judges that it is a power failure momentarily and self-maintains the operation command while the control power supply in the inverter establishes or until the main circuit DC voltage becomes almost 0.)

You can change the setting of a function indicated by during operation.
You should stop operation to change the setting of other functions.

Fcode	Communication address		Function name	Setting range
	485 number	Link number		
H17	411h		Operation command selfhold time	0.0 to <u>30.0</u> s
H19	413h	197(C5 h)	Active Drive	0 to 1 0 : Inactive 1 : Active
H20	414h	198(C6 h)	PID control (Mode select)	0 to 3 0 : Inactive 1 : Active (normal mode output) 2 : Active (inverse mode output 1) 3 : Active (inverse mode output 2)
H21	415h	199(C7 h)	Command select	0 to 1 0 : Keypad panel or 12 input 1 : Analog input (PIDS)
H22	416h	201(C9 h)	P-gain	<u>0.000</u> to <u>1.000</u> to 10.000 (times)
H23	417h	202(CA h)	I-gain	0.00 to <u>1.00</u> to 100.00 s
H24	418h	203(CB h)	D-gain	<u>0.000</u> to <u>10.000</u> s
H25	419h	200(C8 h)	PID control (Upper limit)	-300 to <u>100</u> to 300 %
H26	41Ah	204(CC h)	PID control (Lower limit)	-300 to <u>-100</u> to 300 %
H27	41Bh	206(CE h)	PID control (Speed reference)	0 to 2 0 : Inactive 1 : PID select 2 : Auxiliary speed
H28	41Ch	207(CF h)	Droop control	<u>0.0</u> to <u>25.0</u> %
H29	41Dh		Data protect via serial link	0 to 1 Function not to write data from link (T-Link, RS485, etc.) by mistake. 0 : Non-protect 1 : Protect via serial link There are two writing from the link about usual function field and serial data field. This S field is defined at H30.
H30	41Eh	208(D0 h)	Serial link (Function select)	0 to 3 (Monitor) (Speed reference) (Operation command) 0 : o x x 1 : o o x 2 : o x o 3 : o o o
H31	41Fh		RS485 (Address)	0 to <u>1</u> to 255 Setting of the station address of RS485. broadcast : (0 : RTU) , (99 : Fuji) address : 1 to 255
H32	420h		RS485 (Mode select on no response error)	0 to <u>3</u> 0 : Trip and alarm (Er5) 1 : Operation for H33 timer , and alarm (Er5) 2 : Operation for H33 timer , and retry to communicate. * If the retry fails, then the inverter trips. ("Er5") 3 : Continuous operation
H33	421h		RS485 (Timer)	<u>0.01</u> to <u>2.00</u> to 20.00 s
H34	422h		RS485 (Baud rate)	0 to 4 0 : 38400 bps 1 : 19200 bps 2 : 9600 bps 3 : 4800 bps 4 : 2400 bps
H35	423h		RS485 (Data length)	0 to 1 0 : 8 bits 1 : 7 bits
H36	424h		RS485 (Parity check)	0 to <u>1</u> to 2 0 : No checking 1 : Even parity 2 : Odd parity
H37	425h		RS485 (Stop bits)	0 to <u>1</u> 0 : 2 bits 1 : 1 bit
H38	426h		RS485 (No response error detection time)	0.0 to <u>60.0</u> s 0.0 : Detection of communication break invalid 0.1 to 60.0s : Detection of communication break valid It is a function to do Er5 trip detecting the access disappearing for each station which includes an own station in the set time due to some abnormality (no response etc.) from operation via RS485.
H39	427h		RS485 (Response interval)	0.00 to <u>0.01</u> to 1.00 s The time to return the response is set to the demand by a host device.

Underline indicates a factory setting.
Items without underline have different factory settings according to capacity.

Fcode	Communication address		Function name	Setting range
	485 number	Link number		
H40	428h		RS485 (Protocol)	0 to 1 to 2 0 : FUJI inverter protocol 1 : SX bus (FUJI private link) protocol 2 : Modbus RTU protocol Please set 1 (SX bus protocol) when you use the PC loader of the VG7 exclusive use.
H41	429h	209(D1 h)	Torque reference selection	0 to 5 0 : Internal ASR output 1 : AI terminal input (T-REF) 2 : DIA card input 3 : DIB card input 4 : Link input 5 : PID
H42	42Ah	210(D2 h)	Torque current reference selection	0 to 4 0 : Internal ASR output 1 : AI terminal input (IT-REF) 2 : DIA card input 3 : DIB card input 4 : Link input
H43	42Bh	211(D3 h)	Magnetic flux reference selection	0 to 3 0 : Internal calculation value 1 : AI terminal input (MF-REF) 2 : Function setting value (H44) 3 : Link input
H44	42Ch	212(D4 h)	Magnetic flux reference value	10 to <u>100</u> %
H45	42Eh	215(D7 h)	Observer (Mode select)	0 to 2 0 : Inactive 1 : Active (load disturbance observer) 2 : Active (oscillation suppressing observer)
H47	42Fh	216(D8 h)	(P-gain 1)(M1)	<u>0.00</u> to 1.00 (times)
H48	430h		(P-gain 2)(M2)	<u>0.00</u> to 1.00 (times)
H49	431h	217(D9 h)	(I-gain 1)(M1)	0.005 to <u>0.100</u> to 1.000 s
H50	432h		(I-gain 2)(M2)	0.005 to <u>0.100</u> to 1.000 s
H51	433h	218(DA h)	Load inertia M1	0.01 to 50.000 (kg.m ²) (Target ROM No. H1/20064 or later)
H52	434h		Load inertia M2	<u>0.01</u> to 50.000 (kg.m ²) (Target ROM No. H1/20064 or later)
H53	435h	213(D5 h)	Line speed feedback selection	0 to 3 0 : Line speed disabled 1 : Line speed (analog input) (AI-LINE) 2 : Line speed (digital input) (PG(LD)) 3 : High level selected signal
H55	437h		Zero speed control (Gain)	0 to <u>5</u> to 100 (times)
H56	438h		Completion range	0 to <u>100</u> (pulse)
H57	439h		OU alarm prevention	0 to 1 0 : Inactive 1 : Active
H58	43Ah		OC alarm prevention	0 to 1 0 : Inactive 1 : Active
H60	43Ch		Load adaptive control function 1	0 to 3 0 : Inactive 1 : Method 1 2 : Method 2 3 : Method 3
H61	43Dh		Load adaptive control function 2	0 to 1 0 : Winding up on forward rotation 1 : Winding down on forward rotation
H62	43Eh		Winding up speed	<u>0.0</u> to 999.9 m/min
H63	43Fh		Counter weight	<u>0.00</u> to 600.00 (t)
H64	440h		Safety coefficient (for rated torque)	0.50 to <u>1.00</u> to 1.20
H65	441h		Machine efficiency	<u>0.500</u> to 1.000
H66	442h		Rated loading	<u>0.00</u> to 600.00 (t)
H68	444h		Alarm data delete	0 to 1 If these tuning are finished, this data code returns to 0.
H70	446h		Reserved 1	0 to 9999 0 : Standard 1 : Lift 2 to 9999 : Undecided

You can change the setting of a function indicated by during operation.
You should stop operation to change the setting of other functions.

Fcode	Communication address		Function name	Setting range
	485 number	Link number		
H71	447h		Reserved 2	0 to 6 It is not necessary to set usually. If these tuning are finished, this data code returns to 0. 0 : Inactive 1 : ACR system tuning 2 : Voltage gain tuning (execution without connecting motor) 3 : Voltage sensor offset tuning 4 : Current sensor balance tuning 5 : Magnet pole position tuning (for SM driving) 6 : Shunt resistor gain tuning
H72	448h		Reserved 3	0 to 9999 0 : standard 1 to 9999 : Undecided
H73	449h		Reserved 4	0 to 9999 0 : standard 1 to 9999 : Undecided

A: Alternative Motor Parameters

Fcode	Communication address		Function name	Setting range
	485 number	Link number		
R01	501h		M2-Control method	0 to 1 M2 is an induction motor only for the vector control. 0 : Vector control with PG 1 : Vector control without PG
R02	502h		M2-Rated capacity	<u>0.00</u> to 500.00kW at F60=0 <u>0.00</u> to 600.00HP at F60=1
R03	503h		M2-Rated current	<u>0.01</u> to 99.99A 100.0 to 999.9A 1000 to 2000A
R04	504h		M2-Rated voltage	<u>80</u> to 999 V
R05	505h		M2-Rated speed	50 to <u>1500</u> to 24000 r/min
R06	506h		M2-Maximum speed	50 to <u>1500</u> to 24000 r/min
R07	507h		M2-Poles	2 to 4 to 12 (poles)
R08	508h		M2-%R1	<u>0.00</u> to 30.00 %
R09	509h		M2-%X	<u>0.00</u> to 50.00 %
R10	50Ah		M2-Exciting current	<u>0.01</u> to 99.99A 100.0 to 999.9A 1000 to 2000A
R11	50Bh		M2-Torque current	<u>0.01</u> to 99.99A 100.0 to 999.9A 1000 to 2000A
R12	50Ch		M2-Slip (Driving)	<u>0.001</u> to 10.000 Hz
R13	50Dh		M2-Slip (Braking)	<u>0.001</u> to 10.000 Hz
R14	50Eh		M2-Iron loss coefficient 1	<u>0.00</u> to 10.00 %
R15	50Fh		M2-Iron loss coefficient 2	<u>0.00</u> to 10.00 %
R16	510h		M2-Iron loss coefficient 3	<u>0.00</u> to 10.00 %
R17	511h		M2-Magnetic saturation coefficient 1	<u>0.0</u> to 100.0 %
R18	512h		M2-Magnetic saturation coefficient 2	<u>0.0</u> to 100.0 %
R19	513h		M2-Magnetic saturation coefficient 3	<u>0.0</u> to 100.0 %
R20	514h		M2-Magnetic saturation coefficient 4	<u>0.0</u> to 100.0 %
R21	515h		M2-Magnetic saturation coefficient 5	<u>0.0</u> to 100.0 %
R22	516h		M2-Secondary time constant	<u>0.001</u> to 9.999 s
R23	517h		M2-Induced voltage coefficient	0 to 999 V
R24	518h		M2-R2 correction coefficient 1	<u>0.000</u> to 5.000
R25	519h		M2-R2 correction coefficient 2	<u>0.000</u> to 5.000

Underline indicates a factory setting.
Items without underline have different factory settings according to capacity.

Fcode	Communication address		Function name	Setting range
	485 number	Link number		
R26	51Ah		M2-R2 correction coefficient 3	<u>0.010</u> to 5.000
R27	51Bh		M2-Exciting current correction coefficient	<u>0.000</u> to 5.000
R28	51Ch		M2-ACR-P gain	0.1 to <u>1.0</u> to 20.0
R29	51Dh		M2-ACR-I gain	<u>0.5</u> to <u>1.0</u> to 100.0 ms
R30	51Eh		M2-PG pulses	100 to <u>1024</u> to 60000
R31	51Fh		M2-thermistor selection	0 to <u>1</u> to 3 0 : No use thermistor 1 : NTC thermistor 2 : PTC thermistor 3 : Ai (M-TMP) Please do the protection level setting of the motor at E30-E32.
R32	520h		M2-Electronic thermal overload relay (Selection)	<u>0</u> to 2 The motor overheating protection operates by using NTC thermistor with the motor only for VG. In this case, please make setting a Electronic thermal "Inactive". 0 : Inactive 1 : Active (for standard motor, self-cooling fan) 2 : Active (for inverter motor, separate cooling fan)
R33	521h		M2-Electronic thermal overload relay (Level)	<u>0.01</u> to 99.99A 100.0 to 999.9A 1000 to 2000A
R34	522h		M2-Electronic thermal overload relay (Thermal time constant)	<u>0.5</u> to 75.0 min
R35	523h	229(E5 h)	M3-Rated capacity	<u>0.00</u> to 500.00kW at F60=0 <u>0.00</u> to 600.00HP at F60=1
R36	524h	230(E6 h)	M3-Rated current	<u>0.01</u> to 99.99A 100.0 to 999.9A 1000 to 2000A
R37	525h	231(E7 h)	M3-Rated voltage	<u>80</u> to 999 V
R38	526h	232(E8 h)	M3-Maximum voltage	<u>80</u> to 999 V
R39	527h	233(E9 h)	M3-Rated speed	50 to <u>1500</u> to 24000 r/min (Target ROM No. H1/20012 or later)
R40	528h	234(EA h)	M3-Maximum speed	50 to <u>1500</u> to 24000 r/min (Target ROM No. H1/20012 or later)
R41	529h	235(EB h)	M3-Poles	<u>2</u> to 4 to 12 (poles)
R42	52Ah	236(EC h)	M3-%R1	<u>0.00</u> to 30.00 %
R43	52Bh	237(ED h)	M3-%X	<u>0.00</u> to 50.00 %
R44	52Ch	238(EE h)	M3-Exciting current	<u>0.01</u> to 99.99A 100.0 to 999.9A 1000 to 2000A
R45	52Dh	239(EF h)	M3-Slip compensation control	-20.000 to <u>0.000</u> to 5.000 Hz
R46	52Eh	240(F0 h)	M3-Torque boost	<u>0.0</u> to 20.0 0.0 : Automatic torque boost (for CT load) 0.1 to 0.9 : Manual torque boost (for Square torque load) 1.0 to 1.9 : Manual torque boost (for VT load) 2.0 to 20.0 : Manual torque boost (for CT load)
R47	52Fh	241(F1 h)	M3-Thermistor selection	0 to <u>1</u> to 3 0 : No use thermistor 1 : NTC thermistor 2 : PTC thermistor 3 : Ai (M-TMP) Please do the protection level setting of the motor at E30-E32.
R48	530h	242(F2 h)	M3-Electronic thermal overload relay (Selection)	<u>0</u> to 2 0 : Inactive (when using PTC thermistor) 1 : Active (for standard motor, self-cooling fan) 2 : Active (for inverter motor, separate-cooling fan)
R49	531h	243(F3 h)	M3-Electronic thermal overload relay (Level)	<u>0.01</u> to 99.99A 100.0 to 999.9A 1000 to 2000A
R50	532h	244(F4 h)	M3-Electronic thermal overload relay (Thermal time constant)	<u>0.5</u> to 75.0 min

You can change the setting of a function indicated by during operation.
You should stop operation to change the setting of other functions.

O: Optional Functions

Fcode	Communication address		Function name	Setting range
	485 number	Link number		
o01	601h	245(F5 h)	DIA function select	<u>0</u> to 1 0 : Binary 1 : BCD
o02	602h	246(F6 h)	DIB function select	<u>0</u> to 1 0 : Binary 1 : BCD
o03	603h		DIA BCD input speed setting	99 to <u>1000</u> to 7999
o04	604h		DIB BCD input speed setting	99 to <u>1000</u> to 7999
o05	605h		Pulse feedback select	<u>0</u> to 1 0 : Build-in PG 1 : PG(PD) option
o06	606h		Line speed detection (digital) (PG pulses)	100 to <u>1024</u> to 60000 (P/R)
o07	607h		Line speed detection (digital) (Pulse correction function 1)	0 to <u>1000</u> to 9999
o08	608h		Line speed detection (digital) (Pulse correction function 2)	0 to <u>1000</u> to 9999
o09	609h		Definition of absolute PG signal input	<u>0</u> to 16
o10	60Ah		Magnetic pole position offset	<u>0000</u> to FFFF
o11	60Bh		Salient pole ratio	1.000 to 3.000
o12	60Ch		Pulse reference select	<u>0</u> to 2 0 : PG(P/R) option 1 : Internal input
o13	60Dh		Pulse train input form selection	<u>0</u> to 2 0 : Phase difference 90° between A-phase and B-phase 1 : A-phase : Reference pulse, B-phase : Reference sign 2 : A-phase : Forward pulse, B-phase : Reverse pulse
o14	60Eh	247(F7 h)	Reference pulse correction 1	0 to <u>1000</u> to 9999
o15	60Fh	248(F8 h)	Reference pulse correction 2	0 to <u>1000</u> to 9999
o16	610h	249(F9 h)	APR P-gain	0.0 to <u>1.0</u> to 999.9 (times)
o17	611h	250(FA h)	Feed forward gain	<u>0.0</u> to 1.5 (times)
o18	612h		Deviation over width	0 to <u>65535</u> (pulse)
o19	613h		Deviation zero width	0 to <u>20</u> to 1000 (pulse)
o20	61Eh		Action on communication error	<u>0</u> to 3 0 : Forced stop 1 : Stops after preset operation time. 2 : Stops if transmission error continues longer than the operation time. 3 : Continuous operation.
o21	61Fh		LINK error (Timer)	0.01 to <u>0.10</u> to 20.00 s
o22	620h		LINK format select	<u>0</u> to 1 0 : 4W + 4W 1 : 8W + 8W
o23	621h	253(FD h)	Multi-winding motor system (mode)	<u>0</u> to 1 0 : Inactive 1 : Active
o24	622h		Multi-winding motor system (Slave station number)	<u>1</u> to 5 The numbers of slave units except master unit are set when multi-winding motor system is effective.
o25	623h		Link station address	<u>0</u> to 255
o26	624h		Link system slave station	0 to <u>1</u> to 155 (Target ROM No. H1/20062 or later)
o27	625h		Communication definition setting	00 to <u>10</u> to 24
o28	626h		UPAC (Start/stop)	<u>0</u> to 2 0 : Stop UPAC 1 : Start UPAC 2 : Start UPAC (Initialized start) Definition whether the instruction data from UPAC option is made active or inactive.

Underline indicates a factory setting.
Items without underline have different factory settings according to capacity.

Fcode	Communication address		Function name	Setting range
	485 number	Link number		
039	627h		UPAC memory	00 to 1F When the UPAC stop is changed, a pertinent field is set. 0 : Hold 1 : zero clear 1bit : IQ field 2bit : M field 3bit : RM field 4bit : FM field 5bit : SFM field
040	628h		UPAC address	100 to 255 Setting of UPAC address number in which RS485 communication is used when personal-computer accesses UPAC application.

L: Lift Function

Fcode	Communication address		Function name	Setting range
	485 number	Link number		
L01	901h		Password data 1	0 to 9999
L02	902h		Password data 2	0 to 9999
L03	903h		Lift rated speed	0.0 to <u>100.0</u> to 999.9 m/m
L04	904h		Preset S-curve (selection)	0 to 2 0 : Inactive <Normal accel/decel, S-curve (15 steps, S-curve 5)> 1 : Method 1 For VG3/VG5, accel/decel can be controlled via terminal 12 with SS1, SS2, and SS4 all OFF. 2 : Method 2 For VG7, zero speed is selected with SS1, SS2, and SS4 all OFF.
L05	905h		S-curve 1	0 to 50 %
L06	906h		S-curve 2	0 to 50 %
L07	907h		S-curve 3	0 to 50 %
L08	908h		S-curve 4	0 to 50 %
L09	909h		S-curve 5	0 to 50 %
L10	90Ah		S-curve 6	0 to 50 %
L11	90Bh		S-curve 7	0 to 50 %
L12	90Ch		S-curve 8	0 to 50 %
L13	90Dh		S-curve 9	0 to 50 %
L14	90Eh		S-curve 10	0 to 50 %
L15	90Fh		Maker	0 to 1

U: User Functions

Fcode	Communication address		Function name	Setting range
	485 number	Link number		
U01	B01h	219(DB h)	USER P1	-32768 to 32767
U02	B02h	220(DC h)	USER P2	-32768 to 32767
U03	B03h	221(DD h)	USER P3	-32768 to 32767
U04	B04h	222(DE h)	USER P4	-32768 to 32767
U05	B05h	223(DF h)	USER P5	-32768 to 32767
U06	B06h	224(E0 h)	USER P6	-32768 to 32767
U07	B07h	225(E1 h)	USER P7	-32768 to 32767
U08	B08h	226(E2 h)	USER P8	-32768 to 32767
U09	B09h	227(E3 h)	USER P9	-32768 to 32767
U10	B0Ah	228(E4 h)	USER P10	-32768 to 32767
U11	B0Bh		USER P11	-32768 to 32767
U12	B0Ch		USER P12	-32768 to 32767
U13	B0Dh		USER P13	-32768 to 32767
U14	B0Eh		USER P14	-32768 to 32767
U15	B0Fh		USER P15	-32768 to 32767
U16	B10h		USER P16	-32768 to 32767
U17	B11h		USER P17	-32768 to 32767
U18	B12h		USER P18	-32768 to 32767
U19	B13h		USER P19	-32768 to 32767
U20	B14h		USER P20	-32768 to 32767
U21	B15h		USER P21	-32768 to 32767
U22	B16h		USER P22	-32768 to 32767
U23	B17h		USER P23	-32768 to 32767
U24	B18h		USER P24	-32768 to 32767
U25	B19h		USER P25	-32768 to 32767
U26	B1Ah		USER P26	-32768 to 32767
U27	B1Bh		USER P27	-32768 to 32767

You can change the setting of a function indicated by during operation.
You should stop operation to change the setting of other functions.

Fcode	Communication address		Function name	Data setting range
	485 number	Link number		
U28	B1Ch		USER P28	-32768 to 32767
U29	B1Dh		USER P29	-32768 to 32767
U30	B1Eh		USER P30	-32768 to 32767
U31	B1Fh		USER P31	-32768 to 32767
U32	B20h		USER P32	-32768 to 32767
U33	B21h		USER P33	-32768 to 32767
U34	B22h		USER P34	-32768 to 32767
U35	B23h		USER P35	-32768 to 32767
U36	B24h		USER P36	-32768 to 32767
U37	B25h		USER P37	-32768 to 32767
U38	B26h		USER P38	-32768 to 32767
U39	B27h		USER P39	-32768 to 32767
U40	B28h		USER P40	-32768 to 32767
U41	B29h		USER P41	-32768 to 32767
U42	B2Ah		USER P42	-32768 to 32767
U43	B2Bh		USER P43	-32768 to 32767
U44	B2Ch		USER P44	-32768 to 32767
U45	B2Dh		USER P45	-32768 to 32767
U46	B2Eh		USER P46	-32768 to 32767
U47	B2Fh		USER P47	-32768 to 32767
U48	B30h		USER P48	-32768 to 32767
U49	B31h		USER P49	-32768 to 32767
U50	B32h		USER P50	-32768 to 32767
U51	B33h		USER P51	-32768 to 32767
U52	B34h		USER P52	-32768 to 32767
U53	B35h		USER P53	-32768 to 32767
U54	B36h		USER P54	-32768 to 32767
U55	B37h		USER P55	-32768 to 32767
U56	B38h		USER P56	-32768 to 32767
U57	B39h		USER P57	-32768 to 32767
U58	B3Ah		USER P58	-32768 to 32767
U59	B3Bh		USER P59	-32768 to 32767
U60	B3Ch		USER P60	-32768 to 32767
U61	B3Dh		USER P61 / U-Ai1	-32768 to 32767
U62	B3Eh		USER P62 / U-Ai2	-32768 to 32767
U63	B3Fh		USER P63 / U-Ai3	-32768 to 32767
U64	B40h		USER P64 / U-Ai4	-32768 to 32767

Function codes “S” and “M” are codes to access the inverter through links (RS485, T-Link, SX communication, field bus, etc). You cannot use them with the KEYPAD panel. Though you can access the codes “F” to “U” codes through these links, these links are specifically designed to access the code “S” for operation and control and the “M” for data monitoring.

Underline indicates a factory setting.
Items without underline have different factory settings according to capacity.

S: Serial Communication Functions

Fcode	Communication address		Function name	Data setting range
	485 number	Link number		
S01	701h	1(1 h)	Frequency / speed reference (Setting 1)	-24000 to 24000 r/min : (data)*Nmax/20000
S02	702h	2(2 h)	Torque reference	0.01% / 1d
S03	703h	3(3 h)	Torque current reference	0.01% / 1d
S04	704h	4(4 h)	Magnetic-flux reference	0.01% / 1d
S05	705h	5(5 h)	Orientation position reference	0000 to FFFF
S06	706h	6(6 h)	Operation method 1	0000 to FFFF
S07	707h	7(7 h)	Universal Do	0000 to FFFF
S08	708h	8(8 h)	Acceleration time	0.0 to 3600.0 s
S09	709h	9(9 h)	Deceleration time	0.0 to 3600.0 s
S10	70Ah	10(A h)	Torque limiter level 1	0.01% / 1d
S11	70Bh	11(B h)	Torque limiter level 2	0.01% / 1d
S12	70Ch	12(C h)	Operation method 2	0000 to FFFF

M: Monitoring Functions

Fcode	Communication address		Function name	Data setting range
	485 number	Link number		
M01	801h	15(F h)	Speed setting 4 (ASR input)	-24000 to 24000 r/min : (data)*Nmax/20000
M02	802h	16(10 h)	Torque reference	0.01% / 1d
M03	803h	17(11 h)	Torque current reference	0.01% / 1d
M04	804h	18(12 h)	Magnetic-flux reference	0.01% / 1d
M05	805h	19(13 h)	Output frequency reference	0.1Hz / 1d
M06	806h	20(14 h)	Detected speed value	-24000 to 24000 r/min : (data)*Nmax/20000
M07	807h	21(15 h)	Calculated torque value	0.01% / 1d
M08	808h	22(16 h)	Calculated torque current value	0.01% / 1d
M09	809h	23(17 h)	Output frequency	0.1Hz / 1d
M10	80Ah	24(18 h)	Motor output	0.1kW / 1d
M11	80Bh	25(19 h)	Output current rms value	0.1A / 1d
M12	80Ch	26(1A h)	Output voltage rms value	0.1V / 1d
M13	80Dh	27(1B h)	Operation method (final command)	0000 to FFFF
M14	80Eh	28(1C h)	Operation status	0000 to FFFF
M15	80Fh	29(1D h)	Output terminals Y1 - Y18	0000 to FFFF
M16	810h	30(1E h)	Latest alarm data	0 to 48
M17	811h	31(1F h)	Last alarm data	0 to 48
M18	812h	32(20 h)	Second last alarm data	0 to 48
M19	813h	33(21 h)	Third last alarm data	0 to 48
M20	814h	34(22 h)	Accumulated operation time	0 to 65535 h
M21	815h	35(23 h)	DC link circuit voltage	1V / 1d
M22	816h	36(24 h)	Motor temperature	1 °C / 1d
M23	817h	37(25 h)	Type code	0000 to FFFF
M24	818h	38(26 h)	Capacity code	0 to 29
M25	819h	39(27 h)	Inverter ROM (main control) version	0000 to FFFF
M26	81Ah	40(28 h)	Communication error code	0 to 65535
M27	81Bh	41(29 h)	Speed setting on alarm	-24000 to 24000 r/min : (data)*Nmax/20000
M28	81Ch	42(2A h)	Torque reference on alarm	0.01% / 1d
M29	81Dh	43(2B h)	Torque current reference on alarm	0.01% / 1d
M30	81Eh	44(2C h)	Magnetic-flux reference on alarm	0.01% / 1d
M31	81Fh	45(2D h)	Output frequency reference on alarm	0.1Hz / 1d
M32	820h	46(2E h)	Detected speed on alarm	-24000 to 24000 r/min : (data)*Nmax/20000
M33	821h	47(2F h)	Calculated torque on alarm	0.01% / 1d
M34	822h	48(30 h)	Calculated torque current on alarm	0.01% / 1d
M35	823h	49(31 h)	Output frequency on alarm	0.1Hz / 1d
M36	824h	50(32 h)	Motor output on alarm	0.1kW / 1d
M37	825h	51(33 h)	Output current rms value on alarm	0.1A / 1d
M38	826h	52(34 h)	Output voltage rms value on alarm	0.1V / 1d
M39	827h	53(35 h)	Operation method on alarm	0000 to FFFF
M40	828h	54(36 h)	Operation status on alarm	0000 to FFFF
M41	829h	55(37 h)	Output terminal on alarm	0000 to FFFF
M42	82Ah	56(38 h)	Accumulated operation time on alarm	0 to 65535 h
M43	82Bh	57(39 h)	DC link circuit voltage on alarm	0.1V / 1d
M44	82Ch	58(3A h)	Inverter internal temperature on alarm	1 °C / 1d
M45	82Dh	59(3B h)	Heat sink temperature on alarm	1 °C / 1d
M46	82Eh	60(3C h)	Main circuit capacitor capacity	0 to 100 %
M47	82Fh	61(3D h)	PC board capacitor life on alarm	0 to 65535 h

You can change the setting of a function indicated by during operation. You should stop operation to change the setting of other functions.

Fcode	Communication address		Function name	Data setting range
	485 number	Link number		
M48	830h	62(3E h)	Cooling fan life	0 to 65535 h
M49	831h	63(3F h)	Speed setting 1 (before multistep speed command)	-24000 to 24000 r/min : (data)*Nmax/20000
M50	832h	64(40 h)	Speed setting 2 (before calculation of accel/decel.)	-24000 to 24000 r/min : (data)*Nmax/20000
M51	833h	65(41 h)	Speed setting 3 (after speed limit)	-24000 to 24000 r/min : (data)*Nmax/20000
M52	834h	66(42 h)	Control output 1	0000 to FFFF
M53	835h	67(43 h)	Control output 2	0000 to FFFF
M54	836h	68(44 h)	Control output 3	0000 to FFFF
M55	837h	69(45 h)	Option monitor 1	0000 to FFFF
M56	838h	70(46 h)	Option monitor 2	0000 to FFFF
M57	839h	71(47 h)	Option monitor 3	0 to 65535
M58	83Ah	72(48 h)	Option monitor 4	0 to 65535
M59	83Bh	73(49 h)	Option monitor 5	-32768 to 32767
M60	83Ch	74(4A h)	Option monitor 6	-32768 to 32767